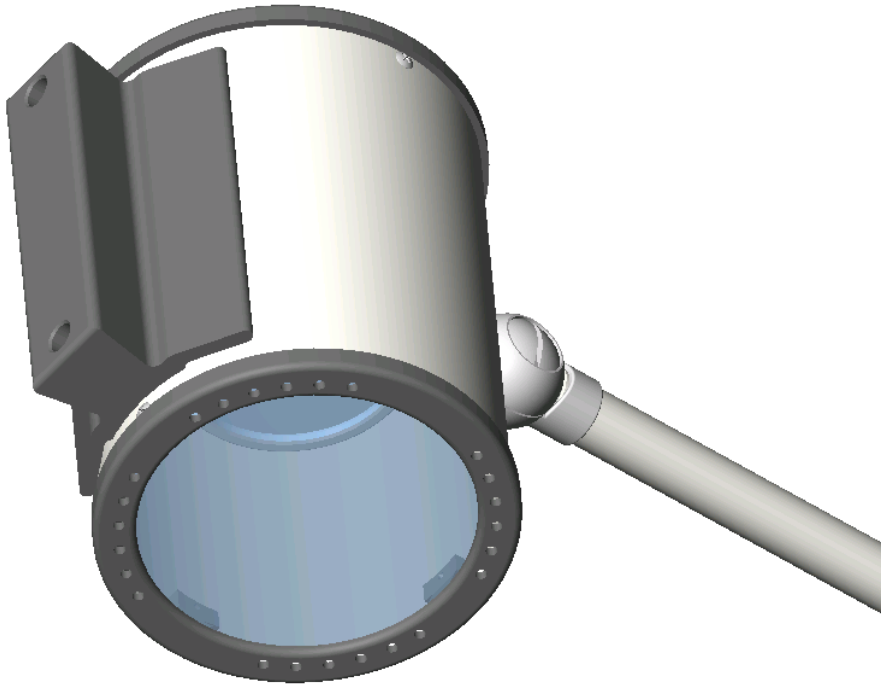
Mounting instructions Directions for use

MAKROLUX

Halogen-spot lamp for consulting room and hospital



Stand model with five-feet base, design without heat protection filter	**1100 1012 00**
Stand model with five-feet base, design with heat protection filter	**1101 1012 00**
Wall model, design without heat protection filter	**1100 1021 00**
Wall model, design with heat protection filter	**1101 1021 00**
Table clamp, design without heat protection filter	**1100 1025 00**
Table clamp, design with heat protection filter	**1101 1025 00**

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List of contents

1. Safety instructions ..... Page 3

2. Mounting instructions ..... Page 4
   2.1 Pre-mounting of the stand ..... Page 4
   2.2 Mounting the stand with the five-feet base ..... Page 4
   2.3 Mounting of the lamp ..... Page 5
   2.4 Wall mounting ..... Page 5
   2.5 Table mounting ..... Page 5

3. Directions for use ..... Page 6
   3.1 ON/OFF switch ..... Page 6
   3.2 Positioning ..... Page 6

4. Cleaning ..... Page 7
   4.1 Lamp head ..... Page 7
   4.2 Protective disk (filter disk) ..... Page 7

5. Maintenance ..... Page 7
   5.1 General information ..... Page 7
   5.2 Changing of spare parts ..... Page 8
      5.2.1 Changing the halogen bulb ..... Page 8
      5.2.2 Changing the protective disk (filter disk) ..... Page 8

6. Data ..... Page 9
   6.1 Technical data ..... Page 9
      6.1.1 Technical data of the lamp Makrolux ..... Page 9
      6.1.2 Technical data of the stand ..... Page 9
   6.2 Environmental conditions ..... Page 10

7. CE-mark ..... Page 10

8. Disposal ..... Page 10

9. Spare parts ..... Page 11
   9.1 Lamp head / arm ..... Page 11
   9.2 Five-foot base ..... Page 11
   9.3 Stand tube ..... Page 12
   9.4 Spare parts for lamp head / arm ..... Page 13
   9.5 Spare parts for five-foot base ..... Page 13
   9.6 Spare parts for stand tube ..... Page 13

1. Safety instructions

<u>Please pay attention to the directions for use when handling the lamp!</u>

The lamp is supplied with integrated connection lead, earthed plug and a transformer 230/12V 20W integrated in the plug. The lamp is to be used only with this transformer.
The socket to be used for the lamp must be installed according to the requirements stipulated by the IEC or VDE 0107.
Please check that the earthed socket is available within the working area of the lamp.

This device is not suitable for use in hazardous locations.
The lamp is manufactured and tested according to the standards IEC DIN 601.
The lamp is tested for electromagnetic compatibility according to the standards EN 60601-1-2 / 4. 1994.
The lamp is classified as a group 1 device according to the MPG (law for medical products).

Repairs to the lamp and special installation work on the reflector or at the transformer should only be carried out by ourselves or a company expressly authorised by ourselves.

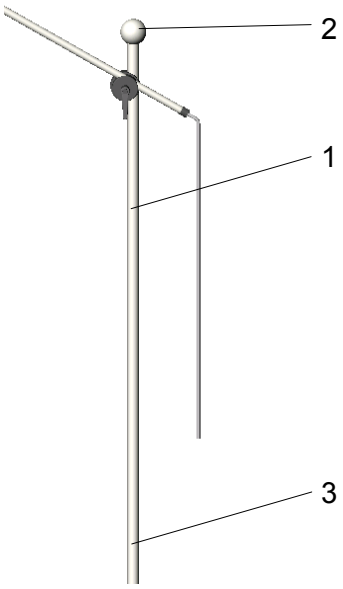
The manufacturer is only responsible for the safety of the lamp if repairs and alterations have been carried out by themselves or a company who can guarantee that the safety regulations have been observed.

The manufacturer is not liable for personal or material damages if the lamp is misappropriately or incorrectly operated or misused.

Attention: The lamp can be disconnected from mains only by pulling the plug off the earthed socket.

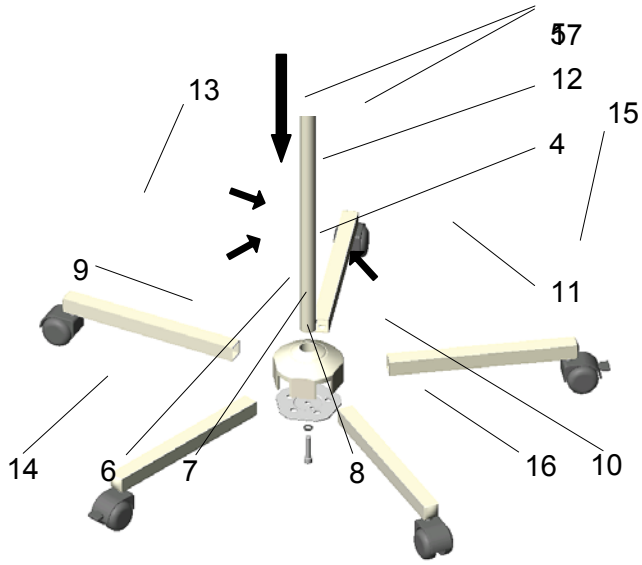
All Dr. Mach stand lamps are supplied with all installation and connection parts and components.
For packaging reasons, the five-foot stand is supplied in dismantled state. The stand tube is always assembled as a unit and only needs to be attached to the foot with the lower fastening screw.

2. Mounting instructions



2.1 Pre-mounting of the stand

Fix the upper part **1** of the stand tube (with ball handle **2**) to the lower part of the stand tube **3** and tighten.



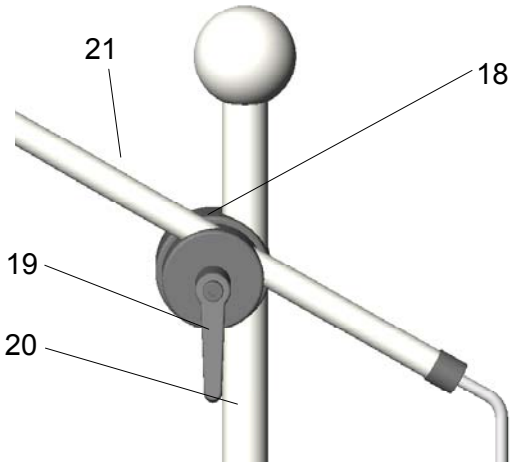
2.2 Mounting the five-feet base with the stand tube

For mounting the stand proceed as follows:

- Place the central base **4** onto the stand tube ∅25 **5**. The stiffness is to ensure a tight fit that is free from any movement.
- Pre-mount the cam catch plate **6** (cams point inwards), with the lock washer **7** and cheese head screw M8 **8**, so that the extension arm **9** can still fit easily into the central base. Insert the extension arm **9** into the central base from above holding the cam catch plate **6** against from the opposite side.
- Insert the other 4 extension arms **10-13** in the sequence shown in the left figure into the central base. The extension arms are held by the cams of the cam catch plates.

Remark: Mount the two locking rollers 14 and 15, and the two electrically conductive rollers 16 and 17 as shown in the figure (not next to each other).

- Tighten the catch plate with an Allen key SW6 (approx. 15Nm).
  The cams of the catch plate must mate with the drill holes of the extension arms so that every extension arm is tightly fitted to both the central base and stand tube.
  The cams also prevent the extension arms from being pulled out.



2.3 Mounting the lamp

- Disengage clamping lever **19** to open plastic joint **18** just enough , so that it can be put on stand **20**.
- The swivel arm **21** has to be mounted n such a way, that its position is above the joint **18** (see figure).
- Adjust height and radius of the swivel arm and tighten clamping lever **19**, so that the friction of the joint holds the lamp in the requested position.

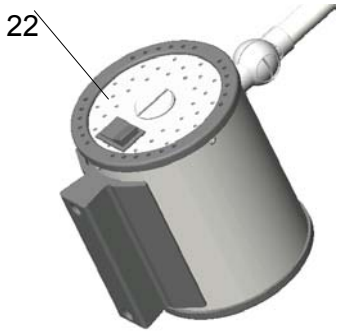
2.4 Wall mounting

- Mark the position of the holes to be drilled in the wall using the wall bearing.
- Drill the holes and insert the dowels.
- Insert the wall bracket into the location hole of the wall bearing and fix it with the clamping grub screw.
- Mount the plastic joint **18** on the wall bracket.
- To mount the lamp proceed as described at point 2.3.

2.5 Table mounting

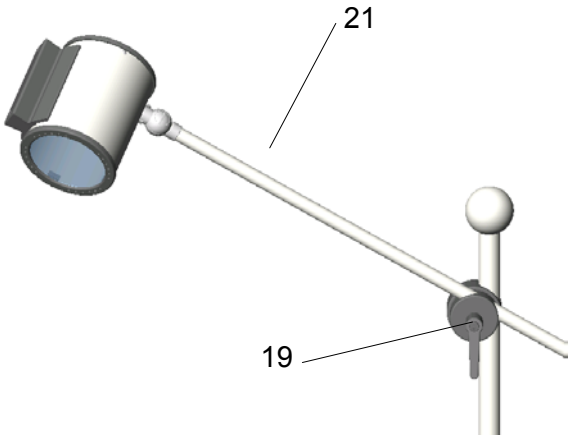
- Screw on table clamp on the table in the desired position.
- Insert the lamp with the upper part 1 of the stand tube into the clamp hole and fix with the clamping grub screw.

3. Directions for use



3.1 ON/OFF switch

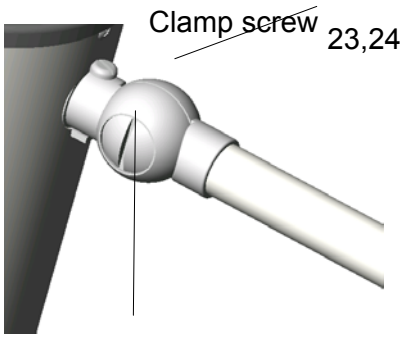
Use the switch **22** at the lamp housing to turn the lamp on and off.



3.2 Positioning

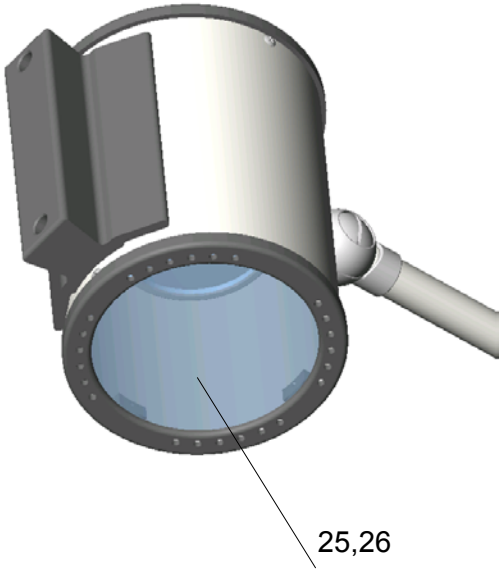
For height adjustment the arm **21** can either be swivelled or adjusted in height by loosening adjusting lever **19**.

The self-locking joints **23, 24** can be adjusted by tightening the clamp screw.



4. Cleaning

4.1 Lamp head



The lamp has a high-quality surface, which can be cleaned with conventional cleaning agents.

Only use disinfectant with less then 20% alcohol.

4.2 Protective disk (filter disk)

The protective disk **25** is made of an high-quality plastic, the filter disk **26** is made of high quality glass. For cleaning use lukewarm water and a soft viscose sponge. Pay attention to the following during cleaning:

- Wipe over the protective disk **25** (filter disk **26**) with a wet cloth (never use a dry cloth!).
- Only use disinfectant with less then 20% alcohol.

Alc. ≤ 20 %

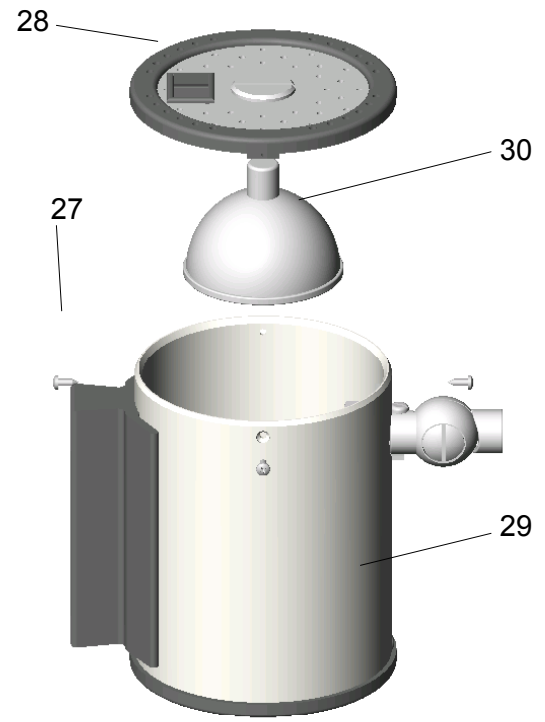
Wipe protective disk **25** (filter disk **26**) after cleaning with an antistatic, non-fluffy cloth.

5. Maintenance

5.1 General information

The lamp is constructed in such a way, that regular service intervals are not required.

If necessary, the clamp screws at the self-locking joints have to be tighten.



5.2 Changing of spare parts

5.2.1 Changing the halogen bulb

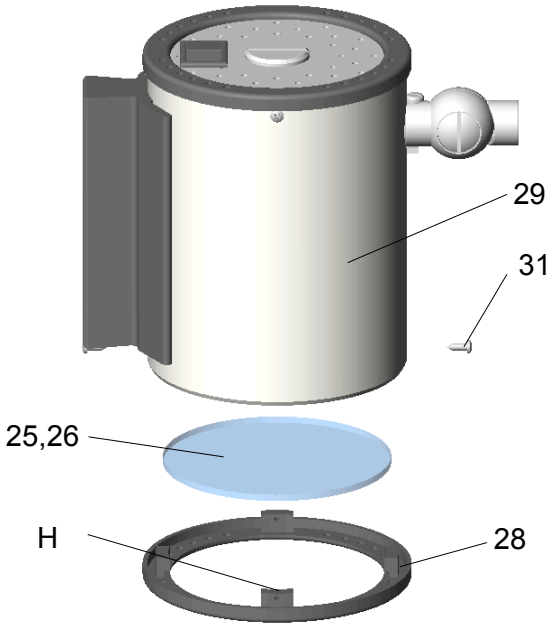
Dr. Mach uses special halogen bulbs as illuminants.
Only original Dr. Mach replacement bulbs may be used.
The use of other bulbs can lead to a considerable reduction of the light power and increase in the thermal load.

Attention! Disconnect from mains before changing the bulb.

To change the bulb proceed as follows:

- Loosen and remove four fixing screws **27** at the upper front ring **28**.
- Lift the upper front ring **28** off the lamp housing **29**.
- Push halogen bulb 12V 20W **30** backwards and turn anticlockwise (bayonet catch).
- Replace upper front ring **28** on the lamp housing **29** and fix it with the screws **27**.

Remark:
The halogen bulbs have a service life of approx. 1000 hours without any deterioration in their luminosity.



5.2.2 Changing the protective disk (filter disk)

To change the protective disk (filter disk) proceed as follows:

- Loosen and remove two fixing screws **31** at the lower front ring **28**.
- Lift the lower front ring **28** off the lamp housing **29**.
- Press the three retaining clamps **H** at the lower front ring **28** carefully to the edge and lift the protective disk **25** or the filter disk **26**.
- Insert the new protective disk or filter disk in reverse order.

6. Data

6.1 Technical data

6.1.1. Technical data of the lamp Makrolux

~ Wechselstrom		Alternating current
Pr Primärseitig	230V / 0,35A	Primary side
Sek Sekundärseitig	12V AC / 1,66A	Secondary side
Hz Hertz – Frequenz	50 / 60Hz	Frequency Hertz
Schutzgrad	Type „B“	Class of protection

6.1.2. Technical data of the stand

Lamp type Data		Makrolux
Stand foot	Number of extension arms	5
	Length of arm	310mm
	Rollers ∅	50mm
Stand tube	Approx. length	95cm – 145cm
	Diameter	25mm
	Extension	yes
	Power supply	no
	Suitable for article no.	1100 1012 00 1101 1012 00
Swivel arm + lamp head	Mounting	• Swivel arm and lamp head pre-mounted • Swivel arm to stand

6.2 Environmental conditions

Operation

	Min.	Max.
Temperature	+10°C	+40°C
Relative atmospheric humidity	30%	75%
Air pressure	700 hPa	1060 hPa

Transport / storage

	Min.	Max.
Temperature	-10°C	+50°C
Relative atmospheric humidity	20%	90%
Air pressure	700 hPa	1060 hPa

7. CE- mark

CE

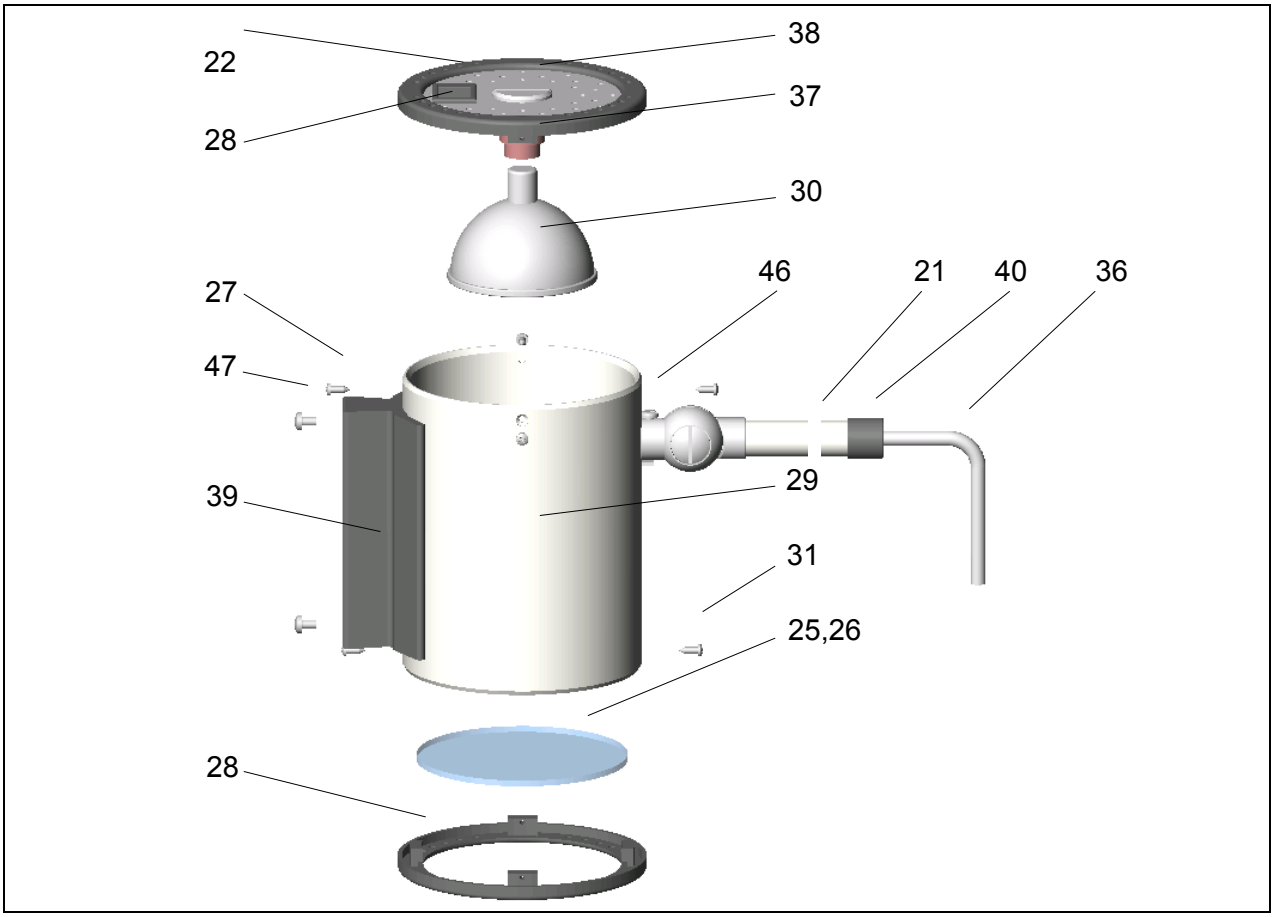
The products Makrolux comply to the standards 93/42/EEC for medical products of the European Community's Council.

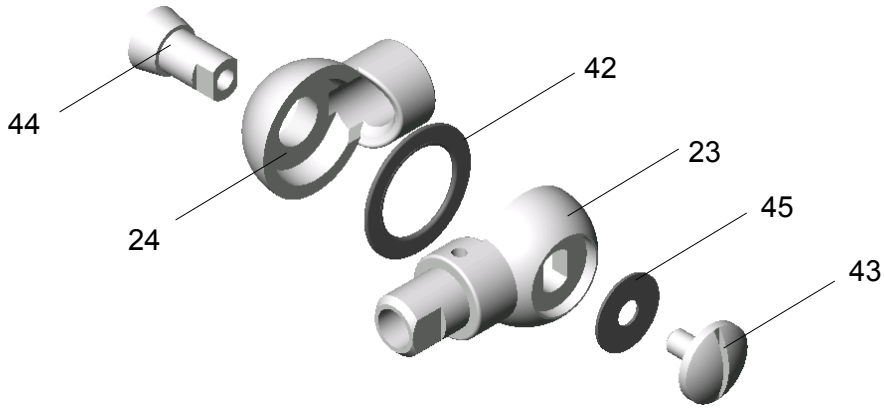
8. Disposal

The components of the lamp should be properly disposed at the end of its shelf-life.
Make sure, that the materials are carefully separated.
The lamp does not contain any danger goods. The components should be disposed according to the contained materials.

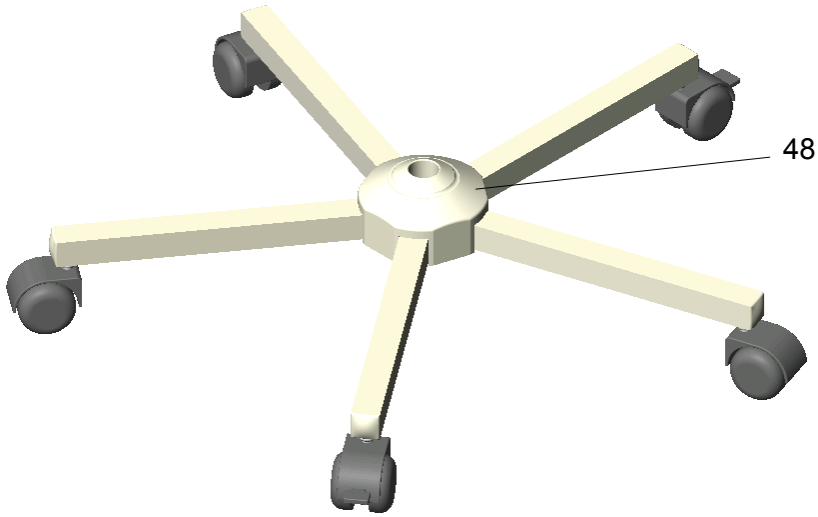
9. Spare parts

9.1 Lamp head, arm

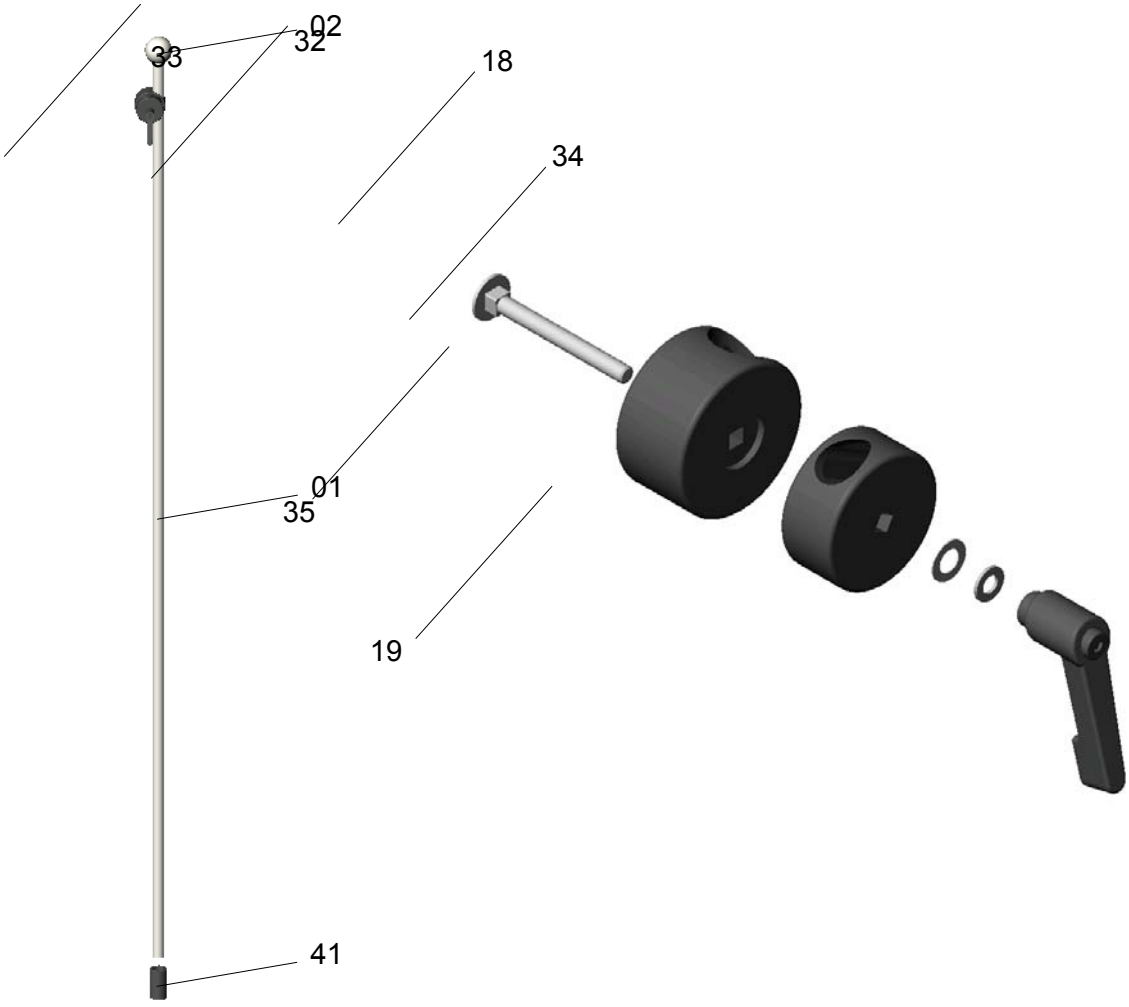




9.2 Five-foot base



9.3 Stand tube



9.4 Spare parts for lamp head / arm

Item	Qty.	Name	EDVNO	Remarks
21	1	Swivel arm	01080205	
22	1	ON/OFF switch	67340004	
23	1	Tilt joint – upper part	01080203	
24	1	Tilt joint – lower part	01080204	
25	1	Protective disk	01011208	
26	1	Filter disk	01011203	
27	4	Sheet metal screw DIN 7982-2,2x6	65872001	
28	2	Front ring	01011202	
29	1	Housing	01011201	
30	1	Halogen bulb (bayonet catch) 12V 20W	67100203	
31	2	Sheet metal screw DIN 7982-2,2x6	65872001	
36	1	Connection cable with plug transformer 12V 20W	67200202	STt 20/230
37	1	Lamp socket	67320004	
38	1	Cap screw	03080214	
39	1	Handle	01011204	
40	1	Strain relief	67700002	
42	1	Brake washer	01080209	
43	1	Screw	01080207	
44	1	Axis	01080206	
45	1	Spring washer	65542001	
46	1	Screw M3x6 DIN 427	65752001	
47	2	Screw M3x5 DIN 7985	65152006	

9.5 Spare parts for stand tube and five-foot base

Item	Pos.	Name	EDVNO	Remarks
01	1	Stand tube (biparted)	74952001	1871
02	1	Spherical handle	74952003	∅40 SW M8
18	2	Plastic joint	01080202	
19	1	Clamping lever	74503003	
32	2	Stand clamp	01080201	
33	1	Screw M5x50 DIN 603:N/A2	65822003	
34	1	Spring washer DIN 137 A5 Fst	65542001	
35	1	Washer A5,3 DIN 125 Fst	65512003	
41	1	Reducing bushing	74952002	
48	1	5-foot base	74905003	